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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,328	03/02/2001	Konstantinos Poulakis	41172	8449

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EXAMINER	
GOFF II, JOHN L	
ART UNIT	PAPER NUMBER

1733

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,328

Applicant(s)

POULAKIS, KONSTANTINOS

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/31/05 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 12, 18, 19, 21, 22, and 26-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (U.S. Patent 4,784,890) in view of Banfield et al. (U.S. Patent 5,286,431) and optionally Dephillipp et al. (DE 3540648 and the English abstract).

Black discloses a method for embedding a fastener assembly within a foam element. Black teaches a flexible fastener assembly comprising a base material (22 of Figure 4) having on its upper, i.e. outer/exposed, surface an attached plastic fastener (12 of Figure 4) and ferromagnetic coating (23 of Figure 4). Black teaches the method comprises securing the assembly on a wall of a foam mold whereby the ferromagnetic coating on the edges of the assembly engages permanent magnets on an exterior surface of the mold (such that the assembly conforms to the contour of the mold), foaming a foam material within the mold to imbed the base

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material of the assembly, and removing the molded foam element (Figures 1-4 and Column 3, lines 9-43 and Column 5, lines 14-36). Black teaches the ferromagnetic coating may be applied directly to a substrate (Column 3, lines 44-65) such that it appears Black discloses directly applying the ferromagnetic coating to the assembly. In any event, Black is not limited to any particular ferromagnetic coating application method, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the ferromagnetic coating taught by Black directly to the assembly as was well known in the art as shown for example by Banfield et al. to avoid having to use an intermediate adhesive. Additionally, Black discloses the base material may comprise a nonwoven (Column 4, lines 17-50) such that it appears Black discloses using a fleece base material. In any event, Black is not limited to any particular base material, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the base material taught by Black any well known and conventional material such as fleece as was known in the same art and shown for example optionally by Dephillipp et al. as only the expected results would be achieved.

Banfield et al. disclose a method for embedding a fastener assembly within a foam element. Banfield et al. teach a flexible fastener assembly comprising a base material (e.g. nonwoven) (6 of Figure 2) having on its upper, i.e. outer/exposed, surface an attached plastic fastener (1 of Figure 2) and ferromagnetic coating (7 of Figure 2), the ferromagnetic coating extending across the entire surface of the assembly and preventing fouling of the fastener during molding. Banfield et al. teach the ferromagnetic coating comprises polyurethane, ferromagnetic material such as iron oxide powder, and solvent. Banfield et al. teach applying the ferromagnetic coating onto the assembly using a knife coater followed by drying the coated assembly. Banfield

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et al. teach attaching the assembly to a molded foam product by securing the assembly on a wall of a foam mold whereby the ferromagnetic coating engages permanent magnets on an exterior surface of the mold (such that the assembly conforms to the contour of the mold), molding a foam element in the mold, and removing the molded foam element with embedded assembly (Figures 2 and 11-15 and Column 5, lines 1-17 and Column 6, lines 14-28 and Column 7, lines 5-68 and Column 8, lines 1-2 and 66-68 and Column 9, lines 1-3). Dephillipp et al. disclose a method for embedding a fastener assembly within a foam element. Dephillipp et al. teach a flexible fastener assembly comprising a fleece base material (10 of Figure 2) having on its upper, i.e. outer, surface an attached plastic fastener (11 of Figure 2) (See Figures 1-3 and English abstract).

Regarding claim 19, it is noted Black as modified by Banfield et al. and optionally Dephillipp et al. are silent as to applying the ferromagnetic coating by nozzle coating. However, Black as modified by Banfield et al. and optionally Dephillipp et al. are not limited to any particular method, and it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the ferromagnetic coating taught by Black as modified by Banfield et al. and optionally Dephillipp et al. in any conventional manner well known in the art such as nozzle coating as only the expected results would be achieved.

4. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Banfield et al., and optionally Dephillipp et al. as applied above in paragraph 3, and further in view of Von et al. (EP 457226 and English abstract).

Regarding claims 13 and 14, Black, Banfield et al., and Dephillipp et al. are silent as to the specific use of polyester as the fleece base material and the specific amount of polyester and

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ferromagnetic coating. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fleece from a polyester such as PET as it was well known in the art to form a fleece used in a molding process from these materials as they are easily shaped and molded as shown for example by Von et al. As to the amount of polyester and the amount of ferromagnetic coating, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize these amounts, e.g. using sufficient polyester to result in good embedding of the fastener and using sufficient ferromagnetic coating for secure attachment, as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claims 15-17, the ferromagnetic coating taught by Black as modified by Banfield et al. and optionally Dephillipp et al. includes polymeric binder, ferromagnetic material, and solvent (Column 3, lines 44-65). Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use polyurethane as the specific polymeric binder and iron oxide as the specific ferromagnetic material as was known as shown for example by Banfield et al. in the same art for the same purpose as only the expected results would be achieved. As to the specific types and amounts of each, it would have been obvious so one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the amounts and specific types of each material as a function of providing an adequate coating, i.e. one that provides secure attachment, as doing so would have required nothing more than ordinary skill and routine experimentation.

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Von et al. disclose textile fleece materials that are high strength, low weight, and can be shaped and molded easily. Von et al. teach the fleece is formed from polyester fibers, preferably PET (See abstract).

5. Claims 20 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Banfield et al., and optionally Dephillipp et al. as applied above in paragraph 3, and further in view of Persoon (U.S. Patent 2,909,442) and Chebiniak (U.S. Patent 3,497,411)

Black as modified by Banfield et al. and optionally Dephillipp et al. teach all of the limitations in claims 20 and 23-25 as applied above except for a teaching on using a transfer ribbon to apply the ferromagnetic coating to the assembly. However, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the ferromagnetic coating taught by Black as modified by Banfield et al. and optionally Dephillipp et al. using a transfer ribbon as it is well known in the art to use a transfer ribbon to apply a coating to a substrate as a means for controlling the width and thickness of the coating as shown for example by Persoon and Chebiniak.

Persoon is directed to applying a magnetic coating to a film. Persoon teaches applying the coating to a transfer carrier ribbon, laminating the transfer ribbon to the film using heat and pressure, and separating the ribbon and film to obtain a film with a magnetic coating of a desired thickness and width (Figures 1-3 and column 1, lines 43-48 and 55-57 and Column 2, lines 18-62). Chebiniak is directed to applying a magnetic coating to a substrate. Chebiniak teaches applying the coating to a transfer carrier substrate, laminating the transfer substrate to the end use substrate using heat and pressure, and separating the two substrates to obtain a substrate with a smooth magnetic coating. Chebiniak further teaches that the carrier substrate may incorporate a

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silicon lubricating substance (Column 1, lines 15-26, 37-38, 51,52, and 63-64 and Column 2, lines 11-14, 45-50, and 55-60 and Column 3, lines 68-73).

6. Claims 12, 18, 19, 21, 22, 26-30, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification page 2, paragraph 1) in view of Banfield et al., Harada (JP 386102 and English abstract), and optionally Sugimoto (JP 1152017 and English abstract).

The admitted prior art discloses a method for forming a foam padding seat comprising a barrier layer and foam wherein the seat is formed by placing a (flexible) barrier layer into a mold and foaming onto the back of the barrier layer such that the barrier layer is embedded. The admitted prior art teaches that the barrier layer simplifies removal of the foam element from the mold and prevents caking or baking of the foam onto the mold in the area of the barrier layer. The admitted prior art notes that during foaming there is a danger of the barrier layer being displaced leading to surface defects in the foam element produced (Specification page 2, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to coat directly on the entire outer surface (i.e. the mold engaging surface) of the barrier layer taught by the admitted prior art a ferromagnetic coating as it was a well known and conventional technique in the art for securing an assembly (including a barrier layer) to a mold provided with magnets to prevent the barrier layer from being displaced during molding as shown for example by Banfield et al. It is noted the admitted prior art is silent as to the materials used to form the barrier layer. However, the admitted prior art is not limited to any particular materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the barrier layer taught by the admitted prior art a fleece as it was well known

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in the art to form a barrier layer from this material when the barrier layer is used to prevent the injected foam from fouling the mold as shown for example by Harada. Thus, the admitted prior art as modified by Banfield et al. and Harada teach a fleece barrier layer used in a molding operation wherein the outer surface of the barrier layer is directly coated with a ferromagnetic layer wherein Sugimoto is further cited as an additional, optional showing of it being known to apply a magnetic layer directly to a fleece barrier layer to secure the barrier layer during molding.

Regarding claim 19, it is noted the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto are silent as to applying the ferromagnetic coating by nozzle coating. However, the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto are not limited to any particular method, and it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the ferromagnetic coating taught by the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto in any conventional manner well known in the art such as nozzle coating as only the expected results would be achieved..

Banfield et al. is described in full detail above. Harada discloses a process of injection molding a resin foam onto a barrier layer. Harada teaches the barrier layer prevents the injected foam from fouling the mold, and Harada further teaches the barrier layer is formed from woven, nonwoven, or knitted cloth, i.e. fleece (See abstract). Sugimoto discloses a process of molding a foam onto a fleece barrier layer to form a molded product wherein the outer surface (i.e. the mold engaging surface) of the barrier layer has a (directly) applied/tacked magnetic layer to secure the barrier layer to the mold during molding (See abstract).

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7. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Banfield et al., Harada, and optionally Sugimoto as applied above in paragraph 6, and further in view of Von et al.

Regarding claims 13 and 14, the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto are silent as to all materials useful as the fleece layer, such as polyester. Further, the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto are silent as to the specific amount of polyester and the amount of ferromagnetic coating applied. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the fleece from a polyester such as PET as it was well known in the art to form a fleece used in a molding process from these materials as they are easily shaped and molded as shown for example by Von et al. As to the amount of polyester and the amount of ferromagnetic coating, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize these amounts, e.g. using sufficient polyester to result in good embedding of the fastener and using sufficient ferromagnetic coating for secure attachment, as doing so would have required nothing more than ordinary skill and routine experimentation.

Regarding claims 15-17, the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto teach the ferromagnetic coating comprises polyurethane, ferromagnetic material such as iron oxide powder, and solvent. It would have been obvious so one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the amounts and specific types of each material as a function of providing an adequate coating, i.e.

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one that provides secure attachment, as doing so would have required nothing more than ordinary skill and routine experimentation.

Von et al. is described above in full detail.

8. Claims 20 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Banfield et al., Harada, and optionally Sugimoto as applied above in paragraph 6, and further in view of Persoon and Chebiniak.

The admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto teach all of the limitations in claims 20 and 23-25 as applied above except for a teaching on using a transfer ribbon to apply the ferromagnetic coating to the fastener. However, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to apply the ferromagnetic coating taught by the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto using a transfer ribbon as it is well known in the art to use a transfer ribbon to apply a coating to a substrate as a means for controlling the width and thickness of the coating as shown for example by Persoon and Chebiniak.

Persoon and Chebiniak are described above in full detail.

9. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art, Banfield et al., Harada, and optionally Sugimoto as applied above in paragraph 6, and further in view of Black.

The admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto teach all of the limitations in claims 31-33 as applied above except for a teaching on using a plurality of permanent magnets in the mold that engage the edges of the ferromagnetic coating, it being noted Banfield et al. suggest a single permanent magnet engaging the entire ferromagnetic

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coating. However, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to use as the permanent magnet set-up in the admitted prior art as modified by Banfield et al., Harada, and optionally Sugimoto one including a plurality of magnets that engage the edges of the ferromagnetic coating as this alternative arrangement was known in the art as shown for example by Black and both would achieve the same result.

Black is described above in full detail.

Response to Arguments

10. Applicant's arguments filed 1/31/05 have been fully considered but they are not persuasive.

Applicants argue, "The Advisory Action appears to suggest that the claimed invention does not require the magnetic material to form a part of the final product. However, claim 12 specifically recites a fleece material that is embedded into the surface of the foam. A fleece material, as well known in the art, is a fibrous material, and is embedded into the foam material during the molding process. Claim 12 specifically recites removing the molded foam element from the mold with the fleece embedded into the surface or foam element and forming a barrier layer on the foam element. The suggestion in the Advisory Action that the fleece is not part of the final product is inconsistent with the plain language of claim 12. Furthermore, one skilled in the art would recognize that molding a foam material directly in contact with a fleece material would result in a final product where the fleece is not removable from the foam without destroying the product."

As stated in the Advisory Action, "Regarding applicants arguments that the magnetic material does not form part of the final foam product, the claims are not commensurate in scope with this argument, it being noted Banfield is cited merely to show the well known technique of using a magnetic coating to secure an article to a mold." The claims **do not** preclude removing the ferromagnetic coating following molding. The claims only require the fleece is embedded. The claims do not require embedding the ferromagnetic coating. In any event, again it is noted

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Banfield is cited merely to show the well known technique of using a magnetic coating to secure an article to a mold.

Applicants further argue, "For example, Banfield clearly fails to disclose a flexible fleece having a flexible ferromagnetic coating. Banfield further fails to disclose or suggest a ferromagnetic coating on a material that is flexible and conforms to the contour of the mold surface thereby holding the flexible material in place during the molding process."

The claims merely require a flexible fleece, and the admitted prior art as modified by Harada clearly meet the limitations. Banfield et al. is not cited to modify the admitted prior art to include a flexible fleece. However, the assembly taught by Banfield et al. includes a nonwoven base material, a material that is flexible and acts as a barrier layer in the same sense as applicants invention, such that teaches of Banfield et al. are clearly applicable to the admitted prior art.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571) 272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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